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Article of jewellery with an element of ornamentation and a method for manufacturing such an article of jewellery

Description

The invention relates to an article of jewellery, in a body of which an opening is provided in which an element of ornamentation is accommodated, in particular a precious stone or an ornamenting stone, wherein in said opening of said body of said article of jewellery accommodating said element of ornamentation a support for said element of ornamentation is formed by providing a lower portion of the opening with a diameter smaller than a diameter of the element of ornamentation, the support defining the depth of insertion of said element of ornamentation in said opening of said body of said article of jewellery in such a way that the element of ornamentation is spaced from a surface of the body and a lower edge of said element of ornamentation is supported at least selectively, wherein between said lower portion and an upper portion of the opening a transition portion constituting said support for the element of ornamentation is provided, and wherein said article of jewellery comprises a securing element extending at least along a part of the circumference of said opening, and a method for manufacturing such an article of jewellery, in particular a ring, in a body of which an opening is provided in which an element of ornamentation is accommodated, in particular a precious stone or an

ornamenting stone, wherein said opening provided in said body of said article of jewellery after a first step of said method has a diameter which is smaller than a diameter of said element of ornamentation to be inserted into said opening, wherein in a subsequent step an upper portion of said opening is formed with a diameter which is equal to or larger than said diameter of said element of ornamentation, so that between said upper portion of said opening with said diameter and a lower portion of said opening with said smaller diameter a transition portion serving as a support for said element of ornamentation is formed, that said element of ornamentation is inserted into said opening and set onto said support so that it is spaced from a surface of the body, whereby in a subsequent step the material of said body of said piece of jewellery is eroded in an area surrounding said opening and that said eroded material is brought to said element of ornamentation accommodated in said opening of said body.

Articles of jewellery wherein an element of ornamentation, in particular a precious stone, is accommodated in an opening are known. A disadvantage of the known articles of jewellery is that the element of ornamentation is mostly disposed just at the surface of the body of the piece of jewellery such that the element of ornamentation accommodated in the body of the piece of jewellery does not exhibit a spatial appearance and generally is observed as a flat ornamentation.

From GB 20849855 an article of jewellery and a method of the above mentioned kind are known. The viewer of an article of jewellery manufactured according to the known method should get the impression that the element of ornamentation inserted into the opening of the body of the article of jewellery - by means of an appropriate design of the area of the body of the article of jewellery surrounding the article of jewellery with facets - exhibits a higher optical presence than it would be the case without the afore mentioned design. Hence, by the method described, the illusion of a larger, optically more present element of ornamentation should be evoked. For this purpose, the British document suggests that for manufacturing the facets, the body of the article of jewellery is fixed in a press comprising a faceting punch and a press bed acting against it. In order to fix the article of jewellery in position in the press it is provided that the body of the article of jewellery at its face

opposite to the opening has a circular groove concentric with the opening and cooperating with ribs of the of the press bed. Then a press force acts upon the faceting punch and cold-works the material of the body of the article of jewellery surrounding the opening in such a way that a force directed towards the element of ornamentation accommodated in the opening acts upon this material. In this way this material is displaced towards the element of ornamentation and forms a securing element for the piece of jewellery.

With other articles of jewellery wherein the element of ornamentation is provided in the opening of the body of the article of jewellery more deeply, the disadvantage occurs that the article of jewellery has to be fixed in the opening by a procedure of sticking. This proceeding has the disadvantage that especially in case of a precious stone the element of ornamentation can be damaged by the glue used or, in case of a "gentle sticking", is secured in the opening of the body only unsafely, which particularly is disadvantageous if an expensive precious stone is used as an element of ornamentation.

CH 692018A exhibits an article of jewellery, in a body of which an opening is provided, in which an element of ornamentation is accomodated. It is provided that a lower tip of the element of ornamentation is contained in a bore in the body of the article of jewellery, an that its upper edge is fixed by reaming. This article of jewellery has the disadvantages that the element of ornamentation is "cemented" in the opening, so that an improved optical presence of the element of ornamentation is not achived.

EP 1 048 241 describes a setting of an article of jewellery which is not countersunk in an opening. The setting of this element of ornamentation is achieved in that the material of the body is moved over the element of ornamentation. FR 2 855 947 describes a element of ornamentation not being accomodated in an opening.

EP 0 367 923 describes a method for the setting of precious stones, in which the precious stone is pressed in a bore by applying a force. The diameter of the bore is

a little bit smaller than the outer diameter of the precious stone to be set. After pressing the outer peripheries of the precious stone in the bore under the level of the surface of the setting material, metal is reamed over the outer peripheries of the stone to be set.

It is the objective of the present invention to develop further an article of jewellery of the above mentioned kind in a way that, even if the element of ornamentation is accommodated in the opening of the body not just superficially, an improved support and an improved optical presence is ensured, and to create a method for manufacturing such an article of jewellery.

This objective is achieved by the article of jewellery according to the invention by means that said securing element is formed by reaming said opening of said body of said article of jewellery in an area surrounding said opening by a rotating tool and subsequently stabilising the material which was eroded from said area surrounding said opening of said body, and that said securing element acts upon an upper edge of said element of ornamentation at least selectively and that said area surrounding said opening of said body of said article of jewellery is formed conical, so that the opening has in its upper portion a diameter being greater than the diameter of said element of ornamentation.

An advantageous development of the invention provides that said securing element is formed extending substantially along the whole circumference of said opening. Such a measure has the advantage that therewith a particularly safe support of said element of ornamentation is formed in the opening of said body of said article of jewellery.

The method according to the invention provides that the erosion of material in said area surrounding said opening is executed by reaming said area surrounding said opening by a rotating tool, and that a securing element for said element of ornamentation is formed from the such eroded and later restabilized material such that an upper edge of the element of ornamentation is acted upon at least selectively by the such formed securing element and in this way said element of

ornamentation is fixed in position in said opening, and that by this reaming action said area surrounding said opening is formed conical so that this conical area, starting from the support element, rises to the surface of the body and the diameter of the opening is enlarged.

An advantageous further development of the method according to the invention provides that said securing element is formed extending substantially along the whole circumference of said opening of said article of jewellery. Such implementation of said method has the advantage that therewith a particularly safe support of said element of ornamentation is achieved in said opening. A further advantageous development of the method according to the invention provides that a means for protection against twisting, especially a seat, is formed for at least one corner of said element of ornamentation.

By the measures according to the invention in an advantageous way an article of jewellery, a method particularly advantageous for its manufacturing and a tool suited in particular for the implementation of said method are created, wherein said article of jewellery according to the invention has the advantage that a safe support for said element of ornamentation inserted into said opening of said body of said article of jewellery not just superficially is provided in said opening, too. Another advantage of the countersunk kind of setting of said element of ornamentation rendered possible by the measures according to the invention is that a surface of said piece of jewellery can be treated (grinded, polished, lapidated, etc.) without any problems and without damaging said element of ornamentation accommodated in said opening of said article of jewellery or said element of ornamentation accommodated in said opening of said article of jewellery disturbing the procedure of treatment.

Another advantage of the measures according to the invention is that by the erosion of the material of said body of said article of jewellery in said area surrounding said opening with a reaming tool an improved optical presence of said element of ornamentation accommodated in said opening is given. Furthermore it is an advantage of the invention that the described method is not limited to a special

form of said element of ornamentation. The method according to the invention rather permits safely inserting elements of ornamentation with a plurality of different cuts into an essentially circular opening.

Further advantageous embodiments of the invention are the subject-matter of the dependent claims.